

CLAIMS

What is claimed is:

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1. A system comprising:
2 a primary root splitter to split a data stream transmitted from an upstream
3 server into a plurality of leaf splitter streams;
4 a plurality of leaf splitters to split each of said leaf splitter streams into a
5 plurality of end user streams, wherein one or more of said plurality of leaf
6 splitters is a backup root splitter; and
7 root splitter reassignment logic to reassign one of said backup root
8 splitters as a new primary root splitter responsive to detecting a problem with
9 said primary root splitter.

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1 2. The system as in claim 1 further comprising a load balancer module to
2 direct client streaming requests to particular leaf splitters based on relative load
3 on said leaf splitters.

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1 3. The system as in claim 1 further comprising a redirection subsystem
2 to redirect client streaming requests to a particular point of presence site.

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1 4. The system as in claim 2 further comprising load balancer update
2 logic for removing said backup leaf splitter from said plurality of leaf splitters to
3 which said load balancer directs user streaming requests responsive to said
4 backup root splitter being reassigned as a primary root splitter.

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1 5. The system as in claim 3 further comprising redirection subsystem
2 update logic for notifying said redirection subsystem of said new primary root

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3 splitter responsive to said backup splitter being reassigned as said new primary
4 root splitter.

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1 6. The system as in claim 5 wherein said redirection subsystem update
2 logic transmits said new primary root splitter's IP address to said redirection
3 subsystem.

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1 7. The system as in claim 1 further comprising publish point update
2 logic for updating publishing points within said system responsive to said
3 backup root server being reassigned as said primary root server.

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1 8. The system as in claim 1 further comprising monitoring logic for
2 monitoring said primary root splitter to determine whether said root splitter is
3 operating within normal parameters.

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1 9. The system as in claim 8 wherein said monitoring logic receives a
2 periodic heartbeat signal from said primary root splitter, and wherein not
3 receiving said periodic heartbeat signal for one or more periods indicates a
4 problem with said primary root splitter.

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1 10. The system as in claim 8 wherein said monitoring logic transmits a
2 monitor signal to said primary root splitter, and wherein not receiving a
3 response from said root splitter indicates a problem with said primary root
4 splitter.

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1 11. A method comprising:
2 monitoring a primary root splitter to ensure that said primary root splitter
3 is operating within predefined parameters, said primary root splitter to split a
4 single data stream into multiple data streams transmitted to multiple leaf
5 splitters; and
6 reassigning one of said leaf splitters as a new primary root splitter
7 responsive to detecting that said primary root splitter is not operating within
8 said predefined parameters.

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1 12. The method of claim 11 further comprising:

2 updating a load balancer module to indicate that said leaf splitter is
3 reassigned as a primary root splitter, said load balancer module for distributing
4 user streaming requests to one or more of said leaf splitters based on load on
5 each of said leaf splitters.

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1 13. The method as in claim 11 further comprising:

2 updating a redirection subsystem to indicate that said leaf splitter is
3 reassigned as a primary root splitter, said redirection subsystem for directing
4 client streaming requests to a particular point of presence site.

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1 14. The method of claim 13 further comprising:

2 updating a load balancer module at said point of presence site to indicate
3 that said leaf splitter is reassigned as a new primary root splitter, said load
4 balancer module for distributing user streaming requests to one or more of said
5 leaf splitters at said point of presence site based on load on each of said leaf
6 splitters.

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1 15. The method as in claim 13 wherein updating said redirection
2 subsystem comprises transmitting said new primary root splitter's IP address to
3 said redirection subsystem.

1 16. The method as in claim 11 further comprising:
2 updating one or more broadcast publish points to indicate said new
3 primary root splitter.

1 17. A system comprising:
2 a monitoring subsystem to detect whether a primary root splitter is
3 operating under predetermined operational parameters; and
4 root splitter reassignment logic to reassign a backup root splitter as a new
5 primary root splitter responsive to detecting that said primary root splitter is
6 operating outside of said predetermined operational parameters.

1 18. The system as in claim 17 wherein said backup root splitter is also a
2 leaf splitter to receive a data stream from said primary root splitter and to split
3 said data stream into a plurality of user streams when said primary root splitter
4 is operating under said predetermined operational parameters.

1 19. The system as in claim 17 wherein said monitoring subsystem detects
2 whether said primary root splitter is operating under predetermined operational
3 parameters by periodically receiving a signal transmitted from said primary root
4 splitter.

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1 20. The system as in claim 17 further comprising load balancer logic for
2 directing client streaming requests to said leaf splitter based on relative load of
3 said leaf splitter in relation to one or more additional leaf splitters.

1 21. The system as in claim 20 further comprising a redirection subsystem
2 to redirect client streaming requests to a particular point of presence site at
3 which said load balancer and one or more of said leaf splitters reside.

1 22. An article of manufacture including a sequence of instructions which,
2 when executed by a processor, cause said processor to:

3 monitor a primary root splitter to ensure that said primary root splitter is
4 operating within predefined parameters, said primary root splitter to split a
5 single data stream into multiple data streams transmitted to multiple leaf
6 splitters; and

7 reassign one of said leaf splitters as a new primary root splitter responsive
8 to detecting that said primary root splitter is not operating within said
9 predefined parameters.

1 23. The article of manufacture as in claim 22 including additional
2 instructions which, when executed by said processor, cause said processor to:

3 update a load balancer module to indicate that said leaf splitter is
4 reassigned as a primary root splitter, said load balancer module for distributing
5 user streaming requests to one or more of said leaf splitters based on load on
6 each of said leaf splitters.

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1 24. The article of manufacture as in claim 23 including additional
2 instructions which, when executed by said processor, cause said processor to:
3 update a redirection subsystem to indicate that said leaf splitter is
4 reassigned as a primary root splitter, said redirection subsystem for directing
5 client streaming requests to a particular point of presence site.

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